

REMARKS

The present amendment is submitted in response to the Office Action mailed May 9, 2006. Claims 1-10 are currently pending in the application. No new matter or issues are believed to be introduced by this amendment. In view of the amendments above and the remarks to follow, reconsideration and allowance of this application are respectfully requested.

Drawing Objection

In the Office Action, the drawings were objected to for failing to show every feature of the invention specified in the claims. A proposed new drawing, Figure 3, is provided in support of claim 5. Applicants respectfully request withdrawal of the drawings objection and approval of the enclosed proposed drawing changes.

35 U.S.C. §102(b)

Claims 1, 6, 9 and 10 were rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,808,979 – Ishibashi.

Applicants respectfully traverse the rejection of claims 1, 6, 9 and 10 under 35 U.S.C. §102(b), however, Claim 1 has been amended. It is respectfully submitted that claims 1, 6, 9 and 10 are patentable over Ishibashi for at least the following reasons.

The Examiner has cited Ishibashi as allegedly anticipating Applicant's claim 1. Independent Claim 1 has been amended to better define Applicant's invention and to

further distinguish from Ishibashi. Claim 1 now recites limitations and/or features which are not disclosed by Cibie.

Claim 1, as amended, recites:

1. Optical disk system comprising at least one photo detector comprising several sub-detectors for detecting at least a part of said optical disk, said at least one photo detector generating detection signals in response to said detection, the optical disk system further comprising several circuits, each circuit having an input directly coupled to a respective output of one of said several sub-detectors for receiving said detection signals, said several circuits comprised of at least one amplifier for amplifying said detection signals and at least one slicer for slicing amplified detection signals, the system further comprising at least one delay-difference detector for detecting delay differences in sliced amplified detection signals, characterized in that said delay-difference detector is delaylineless and comprises combinatorial-logic circuits and sequential-logic circuits.

Ishibashi discloses a tracking error signal detector comprising a photo detector comprised of four photodetector elements. The output of the four photodetector elements are combined by adders 2 and 3 as diagonal sum signals. Respective high-pass filters 4a and 4b then remove the dc component from these diagonal sum signals $S_A + S_C$, and $S_B + S_D$. The diagonal sum signals $S_A + S_C$, and $S_B + S_D$ are passed respectively, through boost filters 5a and 5b of a phase lead type or phase lead/lag type, and low-pass filters 6a and 6b, before waveform processing. Digitizing units 7a and 7b set an appropriate threshold value from the diagonal sum signals, $S_A + S_C$, and $S_B + S_D$ and generate HIGH or LOW digital pulse signals Pa and Pb, respectively. Phase comparator 8a then detects a phase difference between the pulse signals Pa and Pb, and outputs a phase difference signal Po indicative of the direction and magnitude of a tracking error. The phase difference signal Po is filtered by a low-pass filter 9 to remove the

ripple noise component and a tracking error signal is then produced.

In contrast to the detector of Ishibashi, the inventive optical disk system does not create diagonal sum signals $S_A + S_C$, and $S_B + S_D$ passed respectively, through boost filters 5a and 5b of a phase lead type or phase lead/lag type, and low-pass filters 6a and 6b, before waveform processing. Instead, the optical sub-detector photo outputs of the inventive system are fed directly as inputs to the circuits, as recited in claim 1. Ishibashi, by contrast, teaches that the four photodetector outputs are combined by adders 2 and 3 as diagonal sum signals $S_A + S_C$, and $S_B + S_D$.

In further contrast to the detector of Ishibashi, the amplifier and slicer of the inventive system are formed as a single circuit, as recited in claim 1 as amended. Ishibashi, by contrast, teaches a detector having an amplifier for amplifying a combined (sum) signals, the amplifier being coupled to a low pass filter that is coupled in turn to a slicer (see Fig.1 of Ishabashi).

It is therefore respectfully submitted that at least the limitations and/or features of Claim 1, as amended, which are underlined above, is not anticipated by the disclosure of Ishibashi. Specifically, Ishibashi does not disclose or suggest at least, an *optical disk system further comprising several circuits, each circuit having an input directly coupled to a respective output of one of said several sub-detectors for receiving said detection signals, said several circuits comprised of at least one amplifier for amplifying said detection signals and at least one slicer for slicing amplified detection signals....*

Accordingly, withdrawal of the rejection under 35 U.S.C. §102(b) with respect to Claim 1 and allowance thereof is respectfully requested.

Claim 6 depends from independent Claim 1 and therefore contain the limitations of Claim 1 and is believed to be in condition for allowance for at least the same reasons given for Claim 1 above. Accordingly, withdrawal of the rejection under 35 U.S.C. §102(b) and allowance of Claim 6 is respectfully requested.

Independent Claim 9 as amended, recite similar subject matter as Claim 1 and therefore contain the limitations of Claim 1. Hence, for at least the same reasons given for Claim 1, Claim 9 is believed to be allowable over Ishabashi. Accordingly, withdrawal of the rejection under 35 U.S.C. §102(b) and allowance of Claim 9 is respectfully requested.

Claim 10 depends from independent Claim 9 and therefore contain the limitations of Claim 9 and is believed to be in condition for allowance for at least the same reasons given for Claim 9 above. Accordingly, withdrawal of the rejection under 35 U.S.C. §102(b) and allowance of Claim 10 is respectfully requested.

35 U.S.C. §103(a)

In the Office Action, Claims 1-11 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,775,210 – Tateishi in view of Ishabashi.

In view of the amendments above, it is respectfully submitted that the disclosures of Tateishi and Ishabashi, alone and in any proper combination, do not obviate the Applicants' independent claim recitations for claims 1 and 9. Hence, for at least the same reasons given for Claims 1 and 9 above, Claims 1 and 9 are believed to be allowable over the Tateishi in view of Ishabashi, taken alone or in any proper combination.

Accordingly, applicant respectfully request withdrawal of the rejection under 35 U.S.C. §103(a) with respect to Claims 1 and 9 and allowance thereof is respectfully requested.

Claims 2-8 and 10 depend from independent Claims 1 and 9, respectively, and therefore contain the limitations of Claims 1 and 9, and are believed to be in condition for allowance for at least the same reasons given for Claims 1 and 9 above. Accordingly, withdrawal of the rejection under 35 U.S.C. §102(b) and allowance of Claims 2-8 and 10 is respectfully requested.

35 U.S.C. §103(a)

In the Office Action, Claim 11 was rejected under 35 U.S.C. §103(a) as being unpatentable over Tateishi in view of Ishabashi, as applied to claim 1 above, and further in view of Cibie EP Patent No. 1096481 - Ma. In response, claim 11 has been cancelled without prejudice.

35 U.S.C. §103(a)

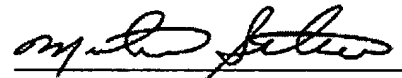
In the Office Action, Claim 11 was rejected under 35 U.S.C. §103(a) as being unpatentable over Ishabashi in view of Ma. It is noted that while the rejection states that claim 1 is rejected, the rejection should more correctly recite the rejection of claim 11. This conclusion is the result of a brief telephonic conversation with the Examiner, conducted on August 9, 2006. As noted in the previous rejection under 103(a), claim 11 has been cancelled without prejudice.

Conclusion

In view of the foregoing amendments and remarks, it is respectfully submitted that all claims presently pending in the application, namely, Claims 1-10 are believed to be in condition for allowance and patentably distinguishable over the art of record.

If the Examiner should have any questions concerning this communication or feels that an interview would be helpful, the Examiner is requested to call Paul Im., Intellectual Property Counsel, Philips Electronics North America, at 914-945-9627.

Respectfully submitted,



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Amendments to the Drawings:

See new drawing sheet, Fig. 3.